

ESTABLISHED IN 1861 THE AMERICAN OLDEST BEE PAPER IN AMERICA

BEE JOURNAL

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NO. 21.



Mr. W. A. Pryal, of North Temescal, Calif., is in Chicago, having come with representatives of the press association. He brought along some fine samples of both comb and extracted honey, being of this year's crop, and taken from the hives the first week in May, some of which he kindly left to sweeten "ye editor." Mr. Pryal has often contributed to the columns of the BEE JOURNAL interesting articles on California bee-keeping interests, more of which we will publish shortly. He made the BEE JOURNAL office several pleasant calls while here. He was "taking in" the great Fair as fast as he could, which is a big job even for a Californian, who is accustomed to seeing wonderful things.

The Josh Billings of Bee-Culture is what "Jake Smith" is proving himself to be in his "amoosin" letters to "Mr. A. I. Gleemings." What an awful "spell" comes over him whenever he attempts to write! After reading his "letter," we almost feel inclined to send him a spelling-book and a dictionary; but if we should, we fear he wouldn't know how to use them. It's dreadful hard to help some folks, especially when they are so willfully ignorant as Jake Smith and a very few others like him! Jake is indeed a "per-cooler hunny-perdoosser!"

Fastening Starters with Paste.

—Mr. C. G. Loof, of Cochranton, O., gives the following in *Gleanings*, as a way to fasten starters of comb foundation in grooved brood-frames, using flour paste for the purpose:

Provide a receptacle a little longer than the frames, fit to hold the starch paste. The paste should be quite thick. The proper consistency can soon be found by trial. The starters should not be less than an inch or more in width, unless of heavy brood foundation. When narrow strips of thin foundation were used, the bees, in nearly every instance, cut it down to the wood. A starter long enough for a Langstroth frame is taken up, and one edge dipped into the starch paste. This edge is pressed down in the groove, which is about $\frac{1}{8} \times \frac{1}{8}$. Then the frame is set away, starter side up, until the starch dries.

The Illinois Honey Exhibit.—

Just after closing the forms of last week's BEE JOURNAL, we received the following notice, which we hope every one of our subscribers in this State will read and heed:

INTERESTING TO ILLINOIS BEE-KEEPERS.

At last we send greeting and congratulations to the bee-keepers of the State of Illinois, for the honor conferred by our present General Assembly, in granting us an appropriation of \$3,500 for the purpose of making an appropriate exhibit of the aparian resources of the State at the Columbian Exposition; and we trust that our bee-keepers will arise to the dignity of the occasion, and respond promptly and liberally to the call of their Executive Committee, with their contributions of honey and wax.

The Premium List and Rules and Regulations will soon be made known by circular, and through the columns of the AMERICAN BEE JOURNAL; in the meantime, let me enjoin upon you the necessity of prompt preparations to harvest the incoming crop of honey in the most artistic and fancy forms

that your skill can dictate. Prepare your cases with mottoes, designs and letters, that the bees can draw and weave into fantastic forms, and rest assured it is the ambition of your Executive Committee to see an apian exhibit from the State of Illinois, that will be in excess of any exhibit ever before seen in the United States.

This appeal, we are aware, comes very late, but through no fault of your State bee-keepers' officials, who have labored almost incessantly for over two years to receive recognition and justice from the hands of their superiors in office. But the goal has been reached, and let us prove worthy of the occasion, and do honor to our industry, to the State, and to the Nation.

J. M. HAMBAUGH.

Spring, Brown Co., Ills.

As stated in the BEE JOURNAL of last week, we trust that every bee-keeper in this State will do all he can to help in making the Illinois honey exhibit one of the greatest attractions at the World's Fair. If you think you can do anything at all towards it, write immediately to Mr. Hambaugh, who will give you such information and assistance as you will likely most need.

The National Stockman of Pittsburgh, Pa., in its May 11th issue, had the following announcement at the head of its bee-keeping column:

We take pleasure in announcing that this Department will hereafter be conducted by Dr. C. C. Miller, of Marengo, Ills., which is equivalent to saying that it will be the brightest and best page of its kind to be found anywhere.

We congratulate our agricultural publishing friends upon their wise selection. Dr. Miller is in great demand, and must be a very busy man. But then, he's one of the right kind—would rather wear out than rust out.

Stings and the Breath.—One of our subscribers has sent the following, taken from some newspaper called the *Investigator*. Evidently the "Investigator" didn't investigate very closely, or it would not have published such a foolish item. It was headed with the attractive words, "Wasp Stings," and continued thus:

It is a fact not generally known, that if one holds his breath, wasps, bees and hornets can be handled with impunity. The skin becomes sting-proof, and holding the insect by the feet, and giving her full liberty of action, you can see her drive her weapon against the impenetrable surface with a force that lifts her body at every stroke; but let the smallest quantity of air

escape from the lungs, and the sting will penetrate at once. I have never seen an exception to this in 25 years' observation.

I have taught young ladies with very delicate hands to astonish their friends by the performance of this feat; and I saw one so severely stung as to require the services of a physician, through laughing at a witty remark of her sister, forgetting that laughing required breath. For a theory in explanation, I am led to believe that holding the breath partially closes the pores of the skin. My experiments in that direction have not been exact enough to be of any scientific value, but I am satisfied that it very sensibly affects the amount of insensible perspiration.—*Science Correspondent*.

What a beautiful theory that is! We wish the writer of those two paragraphs had a chance to try his fine-spun theory. He could afford to be more "exact," after a trial. It no doubt would very sensibly affect his bump of nonsensical ideas, or give him another bump or lump that would cause him to feel quite insensible—which must have been his condition when writing his "scientific pleasantries." O, great is Science! We have all heard of her before, but not as being quite so breathless as in this case.

Preventing After-Swarms is the subject of an article by Bro. Doolittle in *Gleanings* for May 1st. His method is as follows, which he says is "the only certain plan" he knows of:

The morning of the eighth day after a first swarm has issued, I open the hive, take out the first frame, and hastily glance over it for nearly ripe queen-cells; and if none are found, I shake most of the bees off near the entrance of the hive, into which they will immediately run, when the frame is closely inspected for queen-cells, peering into every nook and corner for them; for should some small or crooked one be missed, swarming would surely result. All cells found are cut off, after a frame has been shaken to rid it of bees, for this shaking of the young queens in their cells is almost sure to kill them, or cause deformity.

The next frame is treated the same, unless ripe cells are found, in which case it is set outside the hive, awaiting the finding of a cell from which a queen has hatched, when all are cut off; but should none have hatched, then the best one of these ripe cells is saved and put back into the hive.

In this way we can make sure that no swarm will issue, after the first, from this hive, and it is the only certain plan I know of.

One Cent Postage Stamps we prefer rather than two cent ones. When sending fractions of a dollar, please send us the one cent stamps.

GENERAL QUESTIONS.

In this department will be answered those questions needing IMMEDIATE attention, and such as are not of sufficient special interest to require replies from the 25 or more apiarists who help to make "Queries and Replies" so interesting on another page. In the main, it will contain questions and answers upon matters that particularly interest beginners.—ED.

Transferring Bees—After-Swarms.

On page 489, in the answer to the question about the prevention of after-swarms, I think the editor has the Heddon method of a short way of transferring, and the way of preventing after-swarms, mixed up. As answered, it will just start Mr. Bridenstine's bees to swarming in good earnest.

I have nothing to refer to, but I think the Heddon method of preventing after-swarms is as follows:

When a prime swarm issues, hive it in a new hive on comb foundation starters; place this prime swarm on the stand it formerly occupied, removing the old hive just to one side, with the entrance reversed. Commence turning the old hive a little each day for eight days, when its entrance should correspond with the new prime swarm's hive-entrance.

On the eighth day pick up the old hive and carry it to the far side of the apiary, giving it a new location. The work is then done, and the bees usually do the rest.

GEO. N. PHILLIPSON.

Merrivale, Tex.

ANSWER.—Yes, you are right as to the mixing. That answer was given by an assistant in whom we had great confidence, and it went in without close scrutiny. As soon as your letter was received (and we thank you heartily for calling our attention to the blunder), we called up the guilty party, stood him up in a corner, and proceeded to castigate him in this wise:

"What did you mean by describing a method of transferring when prevention of after-swarms was called for?"

He turned very red in the face, then looked pale and began to tremble. After swallowing hard a few times, he stammered, "I thought the Heddon method was called for."

"Stop letting your teeth chatter that way," said we, "and tell us whether you gave a method for preventing after-swarms."

"Wh—wh—why," said he, and then

he stopped. Then his face brightened, and he said, "Why, how could there be any after-swarms after all the bees were drummed out of the hive?"

"That's an evasion," said we, "and hereafter please don't give transferring instead of prevention of after-swarms, unless you want to be transferred yourself."

By way of apology for our assistant, we may say that the method of transferring originating with Mr. Heddon is so deserving that it has come into great prominence, and when the "Heddon method" is spoken of, it is generally the Heddon method of transferring that is meant, so there is little excuse for the careless answer.

The answer given is the "Heddon method" of transferring, and you are hardly correct in supposing it would set the bees to swarming in good earnest, for surely a plan that has been practiced so long by Mr. Heddon and others would hardly have become so popular if it were open to the objection that it induced swarming. The majority of the bees are driven out, then the hive is so placed that all the field bees will desert the old hive, and the result is that there is no desire to swarm with such a small force, especially as it must be remembered that in general there has been no swarming-fever, and that cells were not started until after the removal of the queen.

Your description of the Heddon method of preventing after-swarms is not so very far out of the way. Instead, however, of reversing the old hive at swarming, turn it only half way around. If your hives face east, then let the old hive face the north or south. Instead of moving the hive a little each day for eight days, Mr. Heddon moves it only once before putting it on its final stand. That is about two days after swarming, when the old hive is turned around parallel with the new one. Three or four days later, or five or six days after swarming, at a time in the day when the bees are well at work in the field, the old hive is removed to a new location. Your plan to move the hive a little every day for eight days, would be a good deal more sure to result in swarming than the plan given by our unfortunate assistant. For, eight days after the issuing of the first swarm is the time Mr. Heddon says at which second-swarms may be expected, and it would be of no use to move the hive after that time. Still, the weakening of the old colony by turning its hive around at the time of

swarming, would do much to prevent further swarming.

To put it in brief, the Heddon method of preventing after-swarms is this:

Suppose your colony swarms June 1st. Hive it on full sheets of wired foundation, put the new hive on the old stand, set the old hive a few inches to one side, facing at right angles to the position of the new hive. On June 3rd, turn the old hive back, facing the same way as the new one. On June 6th or 7th remove the old hive to a new location, at a time in the day when the bees are well at work in the fields.



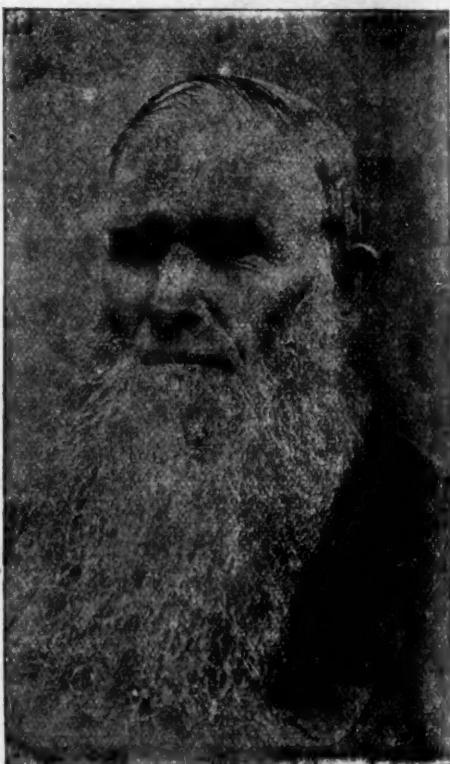
EDWIN FRANCE.

The subject of this biographical sketch is perhaps the oldest among those who answer questions for our department of "Queries and Replies," being nearly 70 years of age. His experience as a large honey-producer makes his bee-writings, though very few, of particular interest and value. It is with pleasure then that we present the following short story of his life, which was written for the "A B C of Bee-Culture," by Dr. C. C. Miller:

Edwin France, of Platteville, Wis., is noted as a producer of extracted honey on a large scale. He was born in Herkimer county, N. Y., on Feb. 4, 1824. His father was furnace-man, molding and melting iron; and, having a large family to support, had difficulty in making both ends meet. At the age of eight young Edwin was sent to live with his mother's brother, returning home at 16. He then served an apprenticeship of four years at the furnace, when his father bought forty acres of timber, which they cleared up as a farm, working at the furnace winters. At the age of 24 his father died, leaving him the main stay of the family. He gave up

the furnace, and worked part of the time making salt-barrels in summers, and cutting sawlogs in winters. About this time he got, and kept on this little place in the woods, a few colonies of bees.

At the age of 32 he took the "Western fever," and settled on a 200-acre prairie farm in Humboldt county, Iowa, marrying and taking with him a wife, leaving his mother in care of her older brother, a single man, amply able to care for her. Here again he kept a few



EDWIN FRANCE.

bees. He lived here six years, farming summers and trapping winters, when the breaking out of the war brought prices of farm products down to a ruinous point, and he went on a visit to Platteville, Wis., intending to return when times brightened. Desiring some employment, he answered an advertisement, "Agents wanted, to sell patent bee-hives," and was soon the owner of the patent for his county. He made the hives himself; and as at that time

nearly every farmer kept bees, the business paid well, and he soon bought two more counties.

In his trades he got some bees, his starting-point as a bee-keeper. These he increased until in 1871, when he went into winter quarters with 123 colonies, bringing out 25 in the spring, and 14 in the spring following. Enlarging his hives, and studying the wants of the bees, led to better success, reaching 500 colonies in the spring of 1888, kept in six apiaries. In 1886, from 395 colonies, he took 42,489 pounds of honey, increasing to 507. In 1885 his 320 colonies averaged 113 pounds each, and his 410 colonies in 1887 averaged 12 pounds each. He owns 11 acres in the city limits of Platteville, devoted to garden truck and berries.

Mr. France and his son do all the work, except during a few weeks in the busy season, when he hires eight assistants from 12 to 18 years old. The whole ten go to one of the different apiaries each day, making a sort of picnic, and returning at night. Mr. F. has not written much for the press; but what he has written bears the marks of ripe experience.



Report of the Texas State Bee-Keepers' Convention.

(Continued from page 622).

SECOND DAY—CONTINUED.

Dr. W. K. Marshall gave an interesting lecture on the subject of

Primitive Bee-Keeping in Texas.

He described the method of making straw-hives, and the appearance of them. There were no lumber mills here then; after saw-mills were established, and box-hives were made of lumber,

every bee-keeper looked upon his possessions with pride, and the hives were constructed according to the taste and mechanical genius and notions of their maker.

He was first to attempt an improved hive in his vicinity; it was so constructed that he could remove one-half, with the idea that he could increase his colonies without the natural process of swarming; his first experiment was a success, and he thought he had the hive—it was perfection; but he was discouraged by the failure of his next experiments to succeed.

His first impression, when he began the study of bees was, that the queen was the ruler, and that the drones laid the eggs; on this he was about to establish a beautiful theory, when he discovered that he must be mistaken; then he concluded that the workers laid the eggs. His first movable-frame hives were made with top-bars, without side or bottom bars, and he had often wondered why he had not discovered the movable-frame before Mr. Quinby did.

When Quinby had perfected his first movable-frame hive, soon many inventions made to sell to the unwary, by persons totally ignorant of even the primitive management of the honey-bee; these "patent gums" were sold by men equally as ignorant as their inventor; and after the bee-moth made its appearance in the West, which was back in the '50's, nearly 50 years after it had been introduced into this country from Europe, the hive vendor had moth-proof hives, moth traps and various arrangements to prevent the moth from entering the hives and "destroying the bees" (?). This new feature had the effect of procuring new victims, increasing the patronage, and bringing forth new inventions fashioned to suit the theory of the inventor, on moth questions. Mr. Quinby was the first man to solve this moth question, and his public assertion that strong colonies were able to protect themselves against the ravages of the moth, was received at first with derision.

Dr. Marshall had used the Quinby frame seven inches deep, and secured more honey, and induced the bees to enter the upper chamber with less difficulty than with the deeper frames. His experience is that a shallow frame is the best. He exhibited a Langstroth frame six inches deep, which he was willing to endorse as the most practical frame, and he was thoroughly convinced that ten frames of this size was large enough for the brood-chamber, and if he were going to engage in the business again,

for either comb or extracted honey, he would use a Quinby frame, six inches deep.

The progress that bee-culture has made since he began the business, has been greater than it could ever be during our time, or that of the present generation.

On the subject of adulteration he boldly and severely criticized Mr. Perrine to whom he sold 20,000 pounds of pure honey, which the purchaser adulterated and sold.

He explained the method of adulterating comb honey, and recounted an experiment he had made with glucose. He took glucose one-third, and extracted honey two-thirds, put his bees in confinement, and soon had all his beautiful combs filled with nice honey (?). It killed all his bees within three weeks! From this he concluded that if it killed his bees in three weeks, it would kill a man at once, if he ate it.

He paid a tribute of respect to the honesty and integrity of the bee-keepers of Texas, more especially to the members of the Texas State Bee-Keepers' Association; he praised the zeal and courage exhibited during the bad seasons, and insisted that we must not become discouraged when the seasons failed. He and Bro. Graham had been in the habit of selecting new men, who, in their opinion, would make successful bee-keepers; some they would conclude were in the business for the money—money without work—others were willing to work, and learn the ways and nature of the bees, and to study the best methods of practical management; they had never been disappointed, as the former class had long since given up the pursuit, and drifted into other employment, while the latter were among the brightest lights in bee-culture to-day.

To make bee-keeping the most profitable, we must curtail expenses, get the cheapest hive and fixtures, which will give the easiest access to the hive and manipulation of the bees, and the best results.

He has been working for some time to institute a bee-keepers' experiment station at the agricultural college, which shall provide for a lecturer on practical and scientific bee-culture, in connection with a sufficient apiary to illustrate practical bee-keeping. While he had been able to accomplish but little toward it, yet he had received considerable encouragement.

A rising vote of thanks was tendered to Dr. Marshall for his interesting and able lecture.—(Concluded next week.)

The Right Time to Transfer Bees.

The question is frequently asked, "When is the best time to transfer bees from box to frame hives?" To this the usual answer is, "Fruit-blooming time." The books say so, and we all have been taking it for granted that it is true, but my experience now says it is not true, and that we have all been making mistakes in transferring at that time.

The reasons given for transferring at that time are, that there are fewer bees and less honey then than at any other time. It is true there are fewer bees, but it is not true that there is less honey. My experience is that between fruit-blooming and clover-blooming, bees consume stores rapidly in brood-rearing, and that they have less stores at the beginning of clover-blooming than at any other time; and the fact that there are more bees then than at fruit-blooming is a strong point in favor of transferring at that time.

The more bees there are when transferred, the quicker they will build up, and the better it is for them.

Last spring I transferred a number of colonies in fruit-blooming time, and some at the beginning of clover blooming. None of those transferred in apple-blooming built up in time for the honey-flow, but nearly all of those transferred at the opening of clover bloom stored a surplus. The reasons for the difference are apparent. There is always some loss of brood in transferring, and a check in the work of the queen. The brood and eggs at fruit-blooming time make the workers on white clover, and if destroyed in transferring at that time, the loss is felt in the honey crop.

The brood and eggs at the beginning of clover bloom do not make workers in time for the honey-flow from that source; and their loss is no loss to the honey crop, but rather a gain, for they would be consumers and not producers. If bees and not honey is the object, better results can be obtained by transferring at the beginning of clover bloom.

H. F. COLEMAN.

Sneedville, Tenn.

Handling the Gentle Hybrids.

Every authority I ever consulted sets down the hybrid as a vicious bee. I have not found it so. I have now handled all kinds, from those that the traces of yellow bands were so slight that I just called them blacks, up to the light-

est 3-banded, and while the Italians are the quietest, and blacks the most nervous, the hybrids sting the least with me. In fact, I have had one colony of hybrids that never would, and never did, sting at all. But after they swarmed and reared a new queen, I found a different "breed of cats" in that hive. Now they know when well used, and can sting if they want to.

The blacks have a way of stinging those that go near the hives, especially strangers, when they are not touched or molested; but when the hive is quietly opened, they are veritable cowards. The Italians are not frightened by opening the hive properly, so long as they can cling to the comb and protect the brood; but let the day be cool or cloudy, with no honey coming in, and these "gentle butterflies" will get in more stings to the second than any hybrid or black I ever struck, as they go straight to the mark with a perfect abandon. Of course I have tried to see how far I could go with them, but any one who would handle bees at an improper time, or in an improper way, deserves to be stung.

I now find all so gentle and easily managed that I wonder that it took me years of study and months of practice to get sense enough in my head so that the hair thereof would not rise right up at the thoughts of opening a bee-hive.

I wish some of those who have nice queens to kill because their workers are cross, would let me know, and send them to me; or that some one who has Cyprian queens would advertise in the BEE JOURNAL. I do believe that if I could get some bees that would defend their hives from thieves here in Florida, in the summer when I am gone, I should be enabled to become an extracted honey specialist in Florida, as well as comb honey in New Hampshire, and pay up a life-long subscription to the AMERICAN BEE JOURNAL.

Grasmere, Fla. E. B. WHIPPLE.

Amerikanische Bienenzucht is the name of a bee-book printed in the German language, which we now have for sale. It is a hand-book on bee-keeping, giving the methods in use by the best American and German apiarists. Illustrated; 138 pages; price, postpaid, \$1.00. It is just the book for our German bee-keepers. We club it with the BEE JOURNAL for one year, for \$1.75.

Have You Read that wonderful book
Premium offer on page 643?



The Best Position for the Entrance to a Hive.

Query 872.—1. Which is the best position for the entrance to a hive—at its side, so the bees on entering pass under the middle of the bottom-bar of the frames, or at the end of the hive, so the bees pass under the end of the frames? 2. Why?—J. B.

1. No difference.—J. P. H. BROWN.
1. I don't know.—J. H. LARRABEE.
1. The end. 2. Reason it out yourself.—WILL M. BARNUM.

1. I do not think it makes any difference.—MRS. L. HARRISON.

1. I have the entrance at the ends of the frames.—G. M. DOOLITTLE.

1. If there is any difference, I have not learned it.—P. H. ELWOOD.

1. It doesn't make any difference. Our bees work in both ways.—E. FRANCE.

1. Bee-keepers are not agreed on this.
2. Try both ways, and see for yourself.—A. B. MASON.

1. The bees enter at the end of the frames, as the passage-way is clearer.—J. M. HAMBAUGH.

1. I have tried both kinds, and can see no difference, yet I prefer the entrance at the end of the hive.—H. D. CUTTING.

1. I never could see that it made a bit of difference, though I have had both styles of hives side by side for years.—A. J. COOK.

1. At the end. 2. They can readily ascend any comb to dispose of the load brought in, and it affords better ventilation.—MRS. J. N. HEATER.

1. I believe it has been long ago decided that it makes no practical difference at what point bees enter a hive, so that the entrance is ample.—G. L. TINKER.

1. I prefer to have the bees enter at the ends of the frames. 2. This ar-

angement brings the center combs more directly in range of the entrance. Another reason is, that in winter the bees will cluster near the entrance, and from that position, if the entrance is at the side of the combs, the stores are not so accessible from the position of the cluster.—M. MAHIN.

1. I have used a good many both ways, and I never observed any difference in the prosperity of the colonies. 2. I prefer, though, the entrance always at the end of the frames, because I do not want to level the hive both ways.—EUGENE SECOR.

1. At the end. 2. Because the bees, having a tendency to store their supplies at the opposite side or end from the entrance, can, in the winter, move towards their supplies much more conveniently *along* the frames than *across* them.—R. L. TAYLOR.

1. It does not make very much difference, and perhaps both plans have advantages. 2. The side-opening is best in cold, stormy weather, and the end plan is perhaps the better when bees are gathering honey. This is, however, an "open question."—C. H. DIBBERN.

1. I do not see why it would be any difference. But I think the entrance should extend the full length of the side or end on which it is, as we have noticed the bees always enter at the point nearest opposite to where they expect to deposit their load.—JAS. A. STONE.

1. I don't think it makes any great difference. What Gallup hives I have, the entrance is under the sides of the frames, and in the Langstroth hives under the ends. 2. Some claim that the wind has less effect on colonies where the entrance is at the side of the frame.—S. I. FREEBORN.

1. We prefer an end entrance. This question has been much debated in Europe, the frames with opening on the end being called "cold frames," while those with opening on one side are called "warm frames." 2. There are arguments *pro* and *con* to both methods.—DADANT & SON.

1. I use the entrance at the end of the hive; I don't know that it possesses any advantages over a side entrance. 2. As I use a Langstroth hive, I prefer the entrance in the end; the hives present a handsomer appearance, and are more convenient to handle when the entrance is so placed.—J. E. POND.

1. At the end. 2. It is better for various reasons, that the hive should

have a slight slant toward the entrance. This is not practicable with the entrance at the side. There is better communication between the entrance and all parts of the hive, and it is much easier to work with a hive having the entrance at the end.—JAMES A. GREEN.

1. I have hives in the yard now that the bees enter both ways, and I cannot tell any difference. In fact, I do not know as it makes any particular difference when the bees enter, but I have a notion that I would rather have them enter at the ends of the frames.—MRS. JENNIE ATCHLEY.

1. I don't care whether it's at the side or end of the hive, so it's at the end of the frames—what's called the cold arrangement. 2. For one thing the bees get to all parts of the hive more readily, but enough is that both ways have been tried, and nearly all agree on the cold arrangement. You can use just which you like.—C. C. MILLER.

1. The end. 2. All hives should slope toward the entrance, and it would not be very convenient to have the entrance in the side. Then it throws the center of the brood-nest farther away from the entrance, which is very important in early spring. The bees also like to build their comb pointing to the entrance. We assume that the frames hang lengthwise of the hive. There are some people who are content to handle a lot of short frames. They might disagree with me.—EMERSON T. ABBOTT.

1. I prefer the entrance at the end of the frames. 2. That "Why?" is mighty short, but the answer must be long to cover the grounds, and I can't go over the points here. It is sufficient to point out the fact that when bees are at work, passing in and out of the hive, and it becomes necessary to open the hive—as it often does at such times—it retards the work, and bothers the bees more to open "gaps" in their nest crosswise than to open them *lengthwise*. This is only one point.—G. W. DEMAREE.

Bee-Keeping for Profit.—The second edition of Dr. Tinker's new book is now ready to send out. It gives his New Management complete, and three years of added experience in its use by himself and other bee-keepers. Several new illustrations have been added, besides much new matter in regard to the use of perforated zinc. Price, 25 cents, postpaid, or clubbed with the **BEE JOURNAL** for one year for \$1.15.



Spring Uniting of Bees Clearly Explained.

Written for the American Bee Journal

BY G. M. DOOLITTLE.

A correspondent writes: "My bees are suffering from spring dwindling, so that my colonies are quite weak, and will not be strong enough to work to advantage when the honey harvest arrives. What shall I do with them? Shall I unite them now, or what shall I do? Please reply through the AMERICAN BEE JOURNAL."

Several years ago, when I wished to unite bees that were weak in the spring, I did so early in the season, as nearly all the writers of that time said I should do it then, as two of the weak colonies would make one strong one. That the uniting of two weak colonies to make one strong one would be a profitable undertaking, no one would deny; still, that uniting must make the *one* better than each of the *two* would have been when the honey harvest arrives, or we would better not touch them.

After practicing the plans as given for a year or two, I became convinced that colonies thus formed were no better at the end of two weeks than each one would have been if left separate. I have put as high as seven remnants of colonies together in April, the seven making a good colony at the time, and in a month all were dead. After coming to the conclusion that I could not unite bees with profit early in the spring, I adopted the following plan, which has proven very successful with me:

About the middle of April, some cool morning, I looked over all of my bees by removing the cap and raising the covering a little, so I can see how strong in bees the colonies are, and all that do not occupy four spaces between the combs are marked, and the first warm day are shut on as many combs as they have brood in, and a division-board placed in

hive so as to contract it to suit the size of the colony. Honey enough is provided to keep them amply for two weeks, and the rest of the combs I store away for safe keeping. The entrances are contracted so as to let but one bee pass at a time, for the smallest colonies, while the larger ones do not have more than an inch in length of entrance given them.

The next work is to increase the brood as fast as possible in these small colonies. I keep them shut on the combs first given them, until they are filled with brood clear down to the bottom, before they are given more room. As soon as this is accomplished, I give them a comb of honey having the cappings to the cells broken by passing a knife flat-wise over them, placing this frame of honey between two full combs of brood. In about a week this comb will be filled with brood as full as the others.

I go over them once a week in this way until I have five frames of brood in the strongest, when I take a frame of brood just hatching, from those having five full frames, and give it to the next strongest, say one that has four frames, putting a frame of honey fixed as before in the place where it came from. Thus I keep working until all of them contain five frames of brood, which should occur from the 10th to the 15th of June, in this locality.

I now go to hive No. 1 and open it, looking the frames over until I find the one the queen is on, when it is set outside of the hive, and the four remaining frames, with all of the adhering bees, are taken to No. 2. I next spread apart the frames in hive No. 2, so as to set the four frames brought from No. 1 in each alternate space made by spreading the frames in No. 2, when the hive is closed. In a few days this colony is ready for the surplus arrangement, and will eventually make as good a colony for storing section honey as the best of the stronger ones—at least such has been my experience so far. I have never known the bees to quarrel, nor a queen to be harmed by this plan of uniting, as the bees and brood are so completely mixed up that they do not know what to fight about.

But to return to No. 1, where the frame with bees, queen and brood were left standing outside of the hive: I now place this frame back in the hive, and put an empty frame with a foundation starter in it beside the same, adjusting the division-board, when I have a nucleus to be used for any purpose I may wish. Many of the old bees carried to hive No.

2 will return, thus making the nucleus a strong one, which will fill the empty frame with nice, straight worker-comb in a few days, and still others, if the queen is left long enough. By the way, let me say that such colonies will build at a less expense than is required to purchase and fill frames with comb foundation, thus a saving is made along this line.

If I wish no increase of colonies during the season, I serve the whole apiary as I did Nos. 1 and 2, beginning early enough to be sure that none have brood in more than five frames. By putting sections on the strongest just before the apple-blossoms appear, quite a few sections are often filled from this source, as the bees must store honey in the sections if anywhere when shut on five frames.

It will be seen that I use nine frames in a hive, but the plan is the same with any number of frames. This having every frame in a hive crowded to the fullest capacity with brood two weeks before the honey harvest has much to do with a good yield of honey. This is the condition all should aim to have their colonies in, and in the above I have tried to tell how it can be done even with the weaker colonies.

Borodino, N. Y.

Terrible Experience with Ants in Hives.

Written for the American Bee Journal

BY E. S. LOVESY.

Ho, for something to exterminate those everlasting ants! I write this hoping that some of our bee-keeping friends may know of something that will exterminate those pests. If any one has a remedy that will successfully accomplish this, he will receive the thanks of many bee-keepers in this section. I would be willing to pay liberally for a recipe that will insure their destruction. With me it has been a long and sore struggle, and many times it has looked doubtful which would win, myself or the ants.

Winter losses and the destruction by those little tormentors have been the only serious drawbacks we have had in this locality. They destroyed 8 colonies for me last season, besides weakening others. They go all over and all through the hives. We have had them by the hundred million. I could not take hold of a hive, box or can, that had honey in, but I would have them running over me

by the hundred, and sometimes 10 to 15 nipping me at once. The only thing a person can do is to drop everything and fight. People may not swear under such conditions, but they would be more than human if they did not think it.

In June, 1892, it looked as though they might destroy every colony in the apiary. The last two colonies that I lost on Tuesday, I saw the ants were working in them, and I washed them off with coal-oil, and thought possibly the bees might get along all right; but on the Friday morning after, although they were both strong colonies, there was not one bee left!

As far as I can discover, the ant bites the bee, and sometime it dies around the hive, but the most of them fly off with the ant, and never return. Sometimes, when I lift the hive-cap off, there will be more ants than bees in the hive. The bees seem to be afraid of them, and when the ant takes hold of the bee it usually rises and flies off, and thus they soon clean out the hive.

I have tried everything I could think of, or hear of—borax, salt, blue vitriol, green coperas, salt petre, Paris green, and coal-oil; of those I found coal-oil to be the best, but if they once get started in the hive, it will not keep them off unless you pour it on two or three times a day.

But finally I built stands from 12 to 18 inches high, then I got a lot of tar and painted them with the tar, which keeps them off. I then went to fighting them on the outside, but at times I almost felt like giving up.

One day I felt very discouraged, when a friend came along—a friend, oh, dear, no! "Well," says he, "you need not worry about those ants. I can tell you what will kill off every last one of them." I felt for a moment like shouting, "Halleluia! is deliverance so nigh?"

Says he, "Take a bit of that vitriol, or some carbolic acid, and pry their mouths open, and see that they swallow it, and it will kill them every time!"

Please do not think me ungrateful when I say that I did not even thank him!

All are probably aware that here in Utah we raise our crops by irrigation. I had a potato patch in my garden last year, which was one solid ant-bed; they seemingly liking the loose soil and the shade of the potato tops. I took a large hoe and the irrigation water once a week, for 3 weeks, and mixed the ants' eggs and soil like mortar. This process seems to be too much for them, for they cannot get out of it. I believe that I

destroyed in this way over two bushels of ants and eggs, and where we could use it we have destroyed them with boiling water. Chickens also pick up many of them, but it would be very desirable to get something that would clean them out entirely.

They are small, black ants, about $3/16$ of an inch long. It is impossible to keep them out of a jar or can of any kind, unless it is tightly corked, or a cloth tied around it. Ours is the worst locality known for these ants.

Salt Lake City, Utah.

Some Suggestions Against Discussing Honey Adulteration.

Written for the American Bee Journal

BY A. C. TYRREL.

The discussion about the adulteration of honey, in my opinion, cannot be condemned in too severe measures.

The idea of bee-keepers advertising to the world, through the bee-papers, that honey is adulterated, is preposterous and absurd.

How indignant we were when a certain Professor gave vent to his little pleasantry (pleasant lie), about the manufacture of comb honey from paraffin, and language was not forcible enough to express our contempt for the author thereof; but what has already been published on the above subject will be more damaging to the pursuit than all that Prof. Wiley ever said or published upon the subject of adulteration.

Take a fine selection of *pure* comb and extracted honey to your merchant, and say to him: "In this degenerate age comb honey is filled with sugar syrup, and the extracted article is largely glucose—let me sell you some *pure* honey." Will he buy? No. But with a little modification, that is just what many illustrious honey-producers are saying to the world—giving it the widest publicity possible. Is it because they want to say *something*?

In the name of common-sense (if there is such a thing) how can we educate the "dear people" to eat honey—no, our manufactured (?) stuff? Give us the names of the persons or firms putting the manufactured material on the market.

Who ever saw a sign over a church door bearing this strange device?—"Do not enter here, and partake of the blessings of Christianity, for thousands of

so-called professing Christians are base deceivers, hypocrites." Whoever read in twelve consecutive numbers of church periodicals a caption in large head-lines like this?—"Another good brother strayed from the fold." Are the names and addresses of church members who have been guilty of selling shoddy goods and adulterated articles of commerce, well knowing them to be such, published to the world? and do they seek to build up the churches, to induce sinners to enter the fold, by continually deplored the wickedness of the flock? I think not. Bee-keepers appear to be trying to build up a business by cussing the cussedness of other bee-keepers.

Did you ever notice the weak points of a mowing-machine brought prominently before the would-be purchaser by the manufacturer or agent? Did you ever see all the large berries put in the bottom of a basket of fruit offered for sale? Did you ever see all the wormy apples placed on top of the measure? Did you ever see a farmer put all his best wheat in the bottom of his wagon-bed, the small potatoes on top of his load brought to market? I guess not. Did you ever see eggs in a grocery labeled: "These eggs are not fresh." Nay, verily. Did you ever see at your green grocers, fruit labeled, "Picked last week;" stacks of pails of gelatine called "raspberry or strawberry jelly?" Yea, verily.

I am at a loss to know why at this time bee-keepers are singled out and set up as a target to be beaten down and ruined by the poisoned darts of their enemies, whilst others guilty of graver offences are not molested. Granting, for argument's sake, that syrup is sold for honey, it is exasperating to us who have never sold an ounce of honey not *strictly pure*, to be even suspected of adulterating our honey. I repeat again that the evil can never be righted, for prominent bee-keepers have *confessed* that honey is adulterated—no more convincing testimony can be produced in court.

How can we best protect ourselves? By placing our bee-papers under lock and key, and not allow our neighbors to read them as formerly. We can sell no more bees, for *honest* men will not compete with those who can produce an inferior article at *half* the cost. I think Eastern producers must feel happy (?) over the havoc they have wrought, if all they have heretofore published is *true*.

Man never has, nor can he ever induce bees to store any substance in combs in the least injurious to the system in sufficient volume to pay for the labor of pre-

paring the decoction. I speak advisedly when I assert that if bees had free access to a barrel of any kind of manufactured syrup, so tainted with sulphuric acid or anything deleterious to our stomachs, they would not store the stuff in the brood-chamber or supers. Why not? Because the entire apiary would become diseased and die before half the barrel had been carried away.

If honey is adulterated, charge the blame to the extractor; this has made it possible; it is one invention that never should have been invented.

The Paddock Pure Food Bill is all right in its intent and purpose, but it never can be enforced without employing a horde of salaried officers to carry out its provisions. We have a law in Nebraska providing for the inspection of coal oil, but the vilest oil is sold all over the State with impunity. Of the making of laws there is no end; laws for the regulation of the liquor traffic, and to prevent adulteration; regulating and stamping out foul brood, and for the protection of our apiaries. We have laws for the protection of society, and certain criminals are speedily punished (if caught).

In certain cases we can make use of the *damn um writ* (*Ad quod damnum*), if our rights are infringed upon. We have laws, good, bad, and indifferent, but they cannot be enforced as intended. What every State is in need of, is fewer laws, and the better enforcement thereof.

If the Paddock Bill becomes a law (and I hope it will), let the provisions of the Bill cover every article manufactured, imported and sold in this country, labels attached to such articles at the producers expense, something like the following:

"These Eggs have been Set on Two Weeks."

"This Milk Contains Water."

"This Cow was 12 Years Old at the Time of Her Demise."

"This Pig was a Hog Once on a Time."

"This Veal was 7 Years Old."

"The Wormy Apples are at the Bottom of this Barrel."

"This Butter, Now Sold at 50 Cents, was Worth but 6 Cents Per Pound when Packed."

"This Pepper is Half P's."

"This 'All Wool' Suit is Half Shoddy."

"This Undershirt is Half Cotton."

"This Mustard is Mixed with Corn-Meal."

"This is Glucose Syrup."

"This is Not Cider Vinegar."

"This Baking Powder is Composed of Ammonia and Other Vile Drugs."

"This Chicken is 5 Years Old."

"This Beer is Made of Aloes, Tobacco, Burnt Umber, and a Little Malt."

Now, Mr. Editor, I hope you will publish the foregoing in the interest of honest bee-keepers.

Madison, Nebr.

[Well, Mr. Tyrrel, we have now published your article, but, for the life of us, we don't see how *keeping still* whenever fraud, corruption and murder are going on, will help matters any. Some one has said that "Silence gives consent," and unless we want to be counted on the side of evil-doers we must speak out against them and their deviltry.

When some one within the fold has been pretty clearly suspected of criminality, we think that at least those immediately associated with him should be warned of his character, as well as the outside world; especially so if the world is to be protected, and also those within the fold. We care not whether you apply this to church, or other organization or fraternity.

We most assuredly believe in denouncing evil at all times, and in all places wherever found, no matter whether it strikes friend or foe; if friend, so much the worse for his hypocrisy. We don't care to have any "friends" among evildoers. Again we can safely fall back upon our motto—"Do right and fear no one"—and hope, and work, and pray that all others may also adopt it as their rule in life.—ED.]

Some Profitable Lessons from "the Blessed Bees."

Written for the "Iowa Homestead"

BY EUGENE SECOR.

This is the time in the year when the enthusiastic novice in apiculture fondly listens to the "hum, sweet hum," of the cheerful, sportive bee, and imagines that this old world was never quite so inviting before. The earth, that has been in icy chains for half a twelve-month, is emerging from its prison-house of snow and putting on its emerald gar-

ments. As he watches the business-like movements and ceaseless activity of the denizen of the hive, he pictures to himself large profit from her proverbial industry. He mentally clothes the earth with flowers, and sees them overflowing with nectar for the benefit of his winged pets, and, therefore, for his own enrichment.

The music of a well-stocked apiary is, at this season, irresistibly fascinating. After six months of death-like stillness one must be devoid of the finer emotions of the soul not to be charmed by the bursting buds, the singing birds and humming bees—all evidences of the earth's resurrected and rejuvenated lifelessness.

Performing her part in the yearly re-creation, the bee leaves her home nest these bright April mornings, as though born with a will to accomplish something. She darts up and away as if a treasure had been discovered that must be forthwith appropriated or forever lost. She plunges into the first crocus blossom she finds, with an apparent determination to carry home all the wealth of its golden treasury before her ambitious and acquisitive neighbors have found its tempting morsel.

But her "sisters, her cousins and her aunts" are equally alert, equally enterprising. They did not stay at home to clean house, nor loaf around a well-filled larder when the choice of field work in the blessed April sun was offered them. So they are all abroad. The whole tribe of *Apis mellifica* are out for an airing, except a few trained and trusty nurses that remained at home to look after the babies and keep up the spirits of the mother-bee. (For you know that neither business nor pleasure must tempt us away from the cradles—the hope and stay of future generations.)

My! what music they make! Their wings seem attuned to heavenly symphonies. Criss-cross through the pathless air they ride, each on her heaven-appointed mission, each doing her mightiest to fulfill the law of her being—work. What wonder if the observant student of nature catches inspiration from her matchless activity, her cheerful blending of labor and enjoyment, and paints the realities of life a little brighter hue in consequence of her example. What wonder if the grass looks greener, the skies softer and the flowers more lovely, as he notes her ready acquiescence in the work assigned her, whether it be for her own benefit or for generations yet unborn. Devotion to the good of her kind is her chief joy.

Sing on, ye happy workers! There's no music like the hum of contented industry. We hail you as evangelists of the doctrine that labor is not necessarily irksome, nor a curse upon mankind—that work may be a blessing to the laborer, and productive of the highest enjoyment, if we accept it willingly and cheerfully as you.

May we, like you, do with our might what our hands find to do.

Forest City, Iowa.

AN EXPERIENCE IN KEEPING BUMBLE-BEES, ETC.

Written for the *American Bee Journal*

BY H. F. KEELER.

I am old in bee-experience, and know but little about the "bird" yet, but having given my attention extensively to a variety of bees not mentioned in the *BEE JOURNAL*, I feel constrained to give a brief description of them, and the net profits of their culture for a term of years.

About 50 years ago, my father being an apiarist in a limited way, I, by constant contact with the business, became interested in a small way, and at that time (circumstances change) I had sufficient caution to adapt my enterprises to my age and limited means, being about 10 or 12 years old.

Father's bee-house was constructed to contain more hives than he had, so I appropriated the balance without rent. This may have contributed somewhat to my success as an apiarist.

I constructed my hives of $\frac{3}{4}$ -inch stuff, 4 inches square, and 5 inches deep, inside measurement, standard size, with a $\frac{3}{8}$ -inch hole half way from top to bottom on the front side, as an entrance for the bees. After stocking up the bee-house with 8 or 10 hives—during my labors in spreading hay—I made it a point to locate the strongest and most profitable varieties of bee-nuclei for transfer at nightfall. I soon had my apiary complete by transferring the entire brood-nest to my hive intact, which was done by lifting the comb with honey and brood surrounded by an ancient mouse-nest, and placing it in my hive.

It should be remembered that the success of this work depends largely upon, 1st, so placing the comb in the hive that the cells point toward the zenith; 2nd, to place the bee-entrance as it was con-

structed, opposite the bee-entrance of the hive.

I confined myself to three varieties, to-wit: The large yellow 5-banded bee, which I found very domestic; the hybrid or 3-banded bee, which is smaller, better breeder, and much better honey-producer, but rather unpleasant to manipulate. I next secured several hives of the small black bee—great fighters, good honey-gatherers, and all in all the most profitable variety of the three. In my selections I was careful to secure only such bees as could take the nectar from red clover.

I kept no diary of my venture, but from memory I am able to give some of the many points of superiority in my bees, which are the "Bombus," or, as the unscientific herd would tell you that *Eupatorium perfoliatum* was Boneset; so they would tell you my bees were bumble-bees, but what's in a name? The points of superiority that are most marked in the Bombus and its hybrids over the Italian and its hybrids are these:

1st. The Bombus requires no preparation for winter, which is no small item of expense.

2nd. You have no old black comb to begin the next season with, which is undoubtedly a fruitful source of "foul brood."

3rd. The Bombus bee selects its own winter quarters, consequently you can extract your entire stock of honey every fall, as the comb is then free from young brood.

4th. The Bombus bees are strictly non-swarming. The time saved to the apiarist and worker bee in this particular is a fruitful source of revenue in a large apiary.

5th. The Bombus bee never gathers anything but the purest nectar, and from the choicest bloom.

Query—Would not the total annihilation of that filth gathering Italian, and the general adoption of the Bombus bee in its stead, be the most effective way to rid the bee-journals of that stale subject of adulterated honey, and of supplying the markets of the world with the pure nectar of the gods?

I have but little charity for the man of one idea. This trait led me of late to temporarily lay aside the work of Bombus bee-culture and substitute the Italian. The change necessitated a change in the construction of my hives, and now in my second boyhood I find myself trying to perfect a hive for the better accommodation of the Italian bee. After putting it to a thorough test

the coming summer, I propose to submit it to the readers of the BEE JOURNAL for an opinion.

WINTERING BEES IN A GREEN-HOUSE.

I have converted my green-house, 10x24 feet, into winter quarters for my bees. I covered the ground floor with old leaves, then arranged my hives in a row through the center, put a stove in one end, and the entrance door in the other. The ground floor did not freeze the past winter, even near the door. The south half of the roof is covered with glass the same as for plant-raising in the spring, making it equally as light as for plants. Contrary to the light-excluding idea I have thrown on them all the light they might get if in their native tree or bee-hive out-of-doors, which I believe to be the correct theory. When they would begin to show any uneasiness, I would raise the hive from the bottom-board, clean it, then build a fire, dry out the hive and building, and give the bees a flight. They make the air thick with their gambols, but go home at night, after two days, and the hive and green-house are dry. I then clean out the litter, and replace it with clean, dry straw, and shut them up again. I gave them several flights the past winter, and in my next I will give you the result of my theory put to practice.

Anamosa, Iowa.

A Description of the New Crane Bee-Smoker.

Written for *Gleanings in Bee-Culture*

BY ERNEST R. ROOT.

In the illustration to be found on page 646, will be seen the outward appearance of the new Crane smoker, which shows that it is beautiful in design, and handsomely and well made. Indeed, it is the most expensive in construction of any smoker ever before put out. The bellows, to begin with, is made ample and substantial, having an inside spiral spring, J, Fig. 1. These springs have been carefully tested: and on an extensive test, with Clark smokers, we find them to be, to coin a word, unbreakable, and elastic. The boards are nicely finished on the outer surface, and the valves are adjusted with great care, each one being inspected before going out.

So far, the smoker presents no new ideas. The particular feature which Mr. Crane claims as his invention is the

check-valve F, in combination with C, Fig. 2, by which smoke is prevented from going into the bellows, and by which a strong concentrated blast is secured. Its details of construction are shown in Figs. 1 and 2. The particular valve is shown in F, Fig. 2. A stamped canal, C, covers the whole, and is perforated at C. A pressure on the bellows opens the valve F, and throws it tightly against the hole C, leaving no exit for the air to escape through the smoker-cup. The moment the pressure is released from the bellows, F drops down into position, closing the hole and leaving ventilation through C.

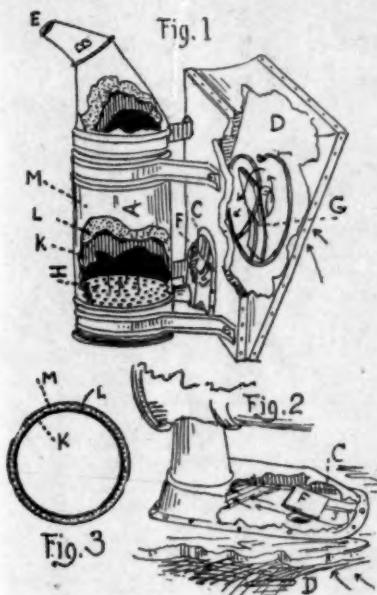
Thus it is that smoke cannot get into

Another feature is, that the smoker-cup and nozzle, up to the ring B, in Fig. 1, is lined with asbestos, L, and sheet steel, K, Figs. 2 and 3. The object of this is to prevent the bright tip surfaces from becoming too hot, and radiating heat. This does away with the use of projecting shields, that are in the way, and more or less unsightly. This asbestos and steel lining also prevents the inside of the cup from becoming too thickly coated with creosote; and it is needless to say, that the smoker will last longer thus lined, and that it will be much easier to remove and to adjust the cone B. The grate, I, Fig. 1, is secured in a bead near the bottom of the cup, and instead of having large perforations that let hot coals drop through more or less, the holes are very small—a trifle larger than that which would be made by a darning-needle through a piece of paper. In the old-style smokers, the grate-holes must be large to let the weak blast through.

The fire-cup itself is fastened to the bellows by means of very neat and strong folded-tin legs. The cup can at any time be released by means of four screws; so also, in a similar manner can the canal covering the special check-valve.

The new smoker presents also still another feature. The bellows is reversed, the large end being upward. But there would be no advantage in reversing the bellows were it not for the fact that the nozzle is *curved*, as shown in Figure 1. This makes it necessary to twist the hand out of the natural and easy position. By always holding the smoker in an upright position, a stream of smoke may be sent at right angles to the plane of the bellows, without disturbing the contents of the fire-cup, and this will avoid throwing sparks. A little practice in manipulating this smoker will show that this combination of bellows and curved snout is the thing. We will suppose that the smoker is standing on the ground. The hand grasps it in the natural way, brings the nozzle above the edge of the hive, and a couple of whiffs, without twisting the hand in the least, sends a stream of smoke over the frames.

This smoker has been submitted, in its less perfect form, to Dr. Miller and others. The Doctor was greatly pleased with it, as were also the others.



New Crane Bee-Smoker.

the bellows, and thus it is that the full power of the bellows is fully conserved; and so strong is the blast, that, no matter how much fuel may be crammed into the cup A, the air has got to go through. In other smokers of this class, there is either no tube between the bellows and fire-cup, or else, if there is one, it has a sort of ventilating hole that soon becomes clogged up in consequence of the air passing back through the bellows. In the absence of a connecting tube, the blast is necessarily very much weakened when the smoker-cup is much crammed with fuel, because not all of the air is compelled to go through the cup.

Building Up Colonies for the Honey-Flow.

Written for the American Bee Journal

BY R. F. HOLTERMANN

The late meeting of our county beekeepers' association and an address upon the above subject by the able President of our Ontario Bee-Keepers' Association, Mr. F. A. Gemmill, of Stratford, Ont., has brought several questions before me. Being in the chair upon that occasion, I was unable to express my views; the subject being seasonable, permit me to say a few words.

There is nothing like natural stores for bees during the spring of the year—plenty of honey given the previous autumn is the best way of feeding a colony in the spring; but if there is not an abundance of honey in the hive, and sealed combs of honey cannot be given, I should say, give the weak colonies sealed stores out of the strong, and feed the strong colonies a syrup made of equal parts of sugar and water, with the slight addition of honey. The honey fed should first be well boiled, particularly is this advisable if the honey is not your own, but even if it is, you may have foul brood in the apiary without knowing it, and when with a little care risk may be avoided, do so.

To feed from the top by means of a Hill or Gem feeder, is probably the better way. Mr. Gemmill cuts a hole in the quilt, and upon this places a piece of wire-cloth nailed on, and a rim upon this; the feeder is inverted, and the bees can take the food through the wire-cloth, but cannot fly up when the feeder is removed for the purpose of refilling.

No colony can be too strong for the honey-flow, or too early. If the bees cannot remain contentedly in the body of the hive, I put on a super, allowing the queen full swing in it, and if this is not sufficient, I add supers. At the beginning of the honey-flow the queen can, by changing a few combs, be confined below the queen-excluder, in the body of the hive. Any surplus from spring blossoms is better consumed in brood-rearing than to extract it and throw it upon the market at a low figure.

Unless one colony is queenless, it is perhaps not well to unite—sooner build up weak colonies, and near the honey-flow unite them, or the brood. To build up weak colonies at the expense of the strong, should never be dreamed of.

I would like to have all colonies

packed above during the spring, and until all danger from cold nights has passed away; but it is quite a trouble and expense, and I cannot always do as I would like to do. This spring I have used on top, first the sealed cover, then one or two thicknesses of paper, finally a cushion filled with absorbents or mineral wool. I have an idea, if the cost is not too great, and I think not, that this article has a great future before it, for the purpose of winter and spring packing of bees. The above protection, with a properly regulated entrance, is all I give a strong colony.

The weaker ones I try to pack in winter cases, and in this way help them to make the best use of the warmth they produce. Some would argue that when a colony is weak in the spring, the indications are that the queen is a poor one. There can surely be no reason why this should be the case. There is no necessity for destroying such a queen—she may be good, and she may not, and the question should be tested before coming to a conclusion.

Many, very many, have failed to make a success of spreading brood. No novice should attempt such until settled warm weather, and even then it should be undertaken with caution. As a rule, the colony will enlarge the brood-chamber quickly enough, but there is a time when, to a certain extent, spreading brood can be practiced with success. The best method is to turn the combs on the outer side of the cluster; about that is the sides towards the center of the hive turned towards the outer side. By so spreading it is done gradually, and no great harm can result.

Brantford, Ont.

CONVENTION DIRECTORY.

Time and place of meeting.

1893.—Capital, at Springfield, Ills.

C. E. Yocom, Sec., Sherman, Ills.

June 16, 17.—S. E. Kansas, at Bronson, Kans.

J. C. Balch, Sec., Bronson, Kans.

Oct. 11, 12, 13.—North American (International), at Chicago, Ills.

Frank Benton, Sec., Washington, D. C.

In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

North American Bee-Keepers' Association

PRESIDENT—Dr. C. C. Miller... Marengo, Ills.

VICE-PRES.—J. E. Crane..... Middlebury, Vt.

SECRETARY—Frank Benton, Washington, D. C.

TREASURER—George W. York... Chicago, Ills.

The Soldier's Grave.

Written for the American Bee Journal
BY C. J. ROBINSON.

Breathe not a whisper here :
The place where thou dost stand is hallowed
ground ;
In silence gather near this upheaved mound—
Around the soldier's bier.

Here liberty may weep,
And freedom pause in her unchecked career,
To pay the sacred tribute of a tear,
O'er the pale warrior's sleep.

That arm now cold in death,
But late on glory's field triumphant bore
Our country's flag ; that marble brow once
bore

The victor's fadeless wreath.

Rest, soldier, sweetly rest ;
Affections gentle hand shall deck thy tomb
With flowers, and chaplets of unfading bloom
Be laid upon thy breast !

Richford, N. Y.



Do not write anything for publication
on the same sheet of paper with business
matters, unless it can be torn apart without
interfering with either part of the letter.

Wintered Without any Loss.

My bees wintered well the past winter
with no loss. The first pollen they got this
spring was on April 3rd. We had a big
snow to day, and the hives are almost cov-
ered up with the snow, which is six inches
deep, on the level. G. W. Nance.

Anthon, Iowa, April 26, 1893.

Lost Only One Colony.

The bees here are nearly all blacks, and
mostly in box-hives, so of course they store
very little honey. Mine are Italians in
Simplicity hives. They did not do much
good last season, as it was too wet. A
great many bees have died here the past
winter. I wintered 18 colonies with the
loss of only one, on the summer stands,
some in chaff hives, and others packed in
chaff. I could not keep bees without the
BEE JOURNAL. WINCHESTER RICKEL.

Burket, Ind., April 25, 1893.

No Surplus Honey Last Year.

No surplus honey was obtained here last
summer. With all the best flowers in
bloom, I had to feed to get drones out to
fertilize queens. While clover, basswood
and Alsike were all blooming at the same
time, yet not a colony was in the upper
story. I have been reading the BEE JOUR-
NAL for 23 years; here one writes, "Clover
is all right." Which kind? Where is the
clover, in his garden lot, in a pasture, or is
it every place?

Except Dodge and Washington counties,
where white clover is grown for seed, the
outlook for this year is that it will take
almost a whole train to take it to market.
It yields from 2 to 11 bushels per acre, and
sells at from \$4.50 to \$10 per bushel. Fully
a fourth part of all the soil is left with this
clover this year. The fields look snow-
white in June, till July. Alsike is crowded
out on account of spoiling the other seed.
What this will do, is not in our power to
foretell yet.

What kind of bees are the most enduring
in this hard time? I say of 8 Cyprian colo-
nies, 6 are up with bees and brood, while all
others seem to be losing in strength. I
wintered 44 colonies out of 47 the past win-
ter.

JOHN H. GUENTHER.

Theresa, Wis., April 29, 1893.

Stored but Little Surplus.

My bees did not store much surplus honey
last year. Over one-half of the bees died
the past winter in this part of the county.
One of my neighbors, who has been in the
bee-business for a number of years, had 65
colonies that he thought were in good con-
dition for winter, but he lost all but 13 or 14
of them. I put in 30 colonies into the cellar,
and they came out all right. I lost 3 colo-
nies out of 10 in double-hives, that I left on
the summer stands. Winter before last I
put 43 colonies into the cellar, and lost one.

D. B. BLAIR.

New Providence, Iowa, April 24, 1893.

Mrs. Smith Lends a Helping (?) Hand.

I notice some reports by lady bee-keepers
in the BEE JOURNAL, and as I come pretty
nearly being a bee-keeper, I thought I
would write for the benefit of some bee-
keepers' wives who may know no more
about bees than I did. Well, what I do
know I have learned by experience.

My husband has been in the bee-business
for four years, and has met with success so
far. He takes the AMERICAN BEE JOURNAL,
in which I often read a little, but thinking
there was not much to learn, I thought I
might assist him some. Well, yesterday
(April 12th) in the afternoon I had a
chance to try it.

Mr. Smith carried out on the summer
stands a few colonies, and then he went
away on business. A very hard wind came
up, and took the cover off from one hive,
also the oil-cloth. Thinking that was not a
very pleasant way for bees to remain, I

thought I would now start to work among the bees. So I went out, feeling quite brave. I walked right up, and tried to put the cloth on, but, oh, you should have seen those bees all come out of that hive as if ready to swarm, and after me! Well, I can assure you it did not take me long to get into the house.

After fighting a while with those that were bold enough to follow me right into the house, I thought I would not be a coward; but would try it again. So I started, feeling not quite so brave as before, but better fixed for a fight, having enough wrappings around me, and a large overcoat in my hand, thinking that if I could not cover them with the hive-cover, I would throw that coat over the whole business, and have them in safe and comfortable until Mr. Smith would return.

Well, I did throw the coat over them, but the bees came after me just the same as before. For all that I tried to do them good, I received nothing but stings as pay; and that is not all, when Mr. Smith came home I thought he would say, "How brave you were, and how good to keep my pets warm and comfortable;" but, instead, he laughed, and went and got the coat, and, to my surprise, the coat was almost covered with bees that had killed themselves by stinging the coat.

I am utterly discouraged in the bee-business. It reminds me of religion. I thought I was doing right to the bees, and, through ignorance, caused myself lots of pain, and their death. Many believe, and think, they are living right, but through ignorance because they do not study the Bible to learn the right way, they cause their own and others' destruction; and sometimes if you want to tell them, and do them good, they will do just as the bees did unto me.

Plum City, Wis. MRS. F. C. SMITH.

Winter Losses from Carelessness.

The past winter, in this locality, was one that will be long remembered by bee-keepers, on account of the heavy loss of bees. I think that I am safe in saying that 75 per cent. of the bees that were wintered out-doors, in single-walled hives, are dead; as several winters before the one just past have been very mild, and bees needed little or no protection, therefore many of the bee-keepers got a little careless, thinking that the old-time winters were a thing of the past, and now they regret the very moment they allowed such a thought to enter their minds. I think that bees will be better cared for, for awhile, especially until their keepers get careless, and another back-set that will take them several years of labor to make up their loss.

I do not consider bees the worst property a man can own, therefore I protect them from the cold, winter storms. It always looks strange to me to see people care for a hog or a sheep and let the bees shift for themselves. Now, it is right to take good care of and protect our stock, but while we do this, let us not forget our little friends—the honey-bees.

I wintered 11 colonies in the cellar, and so far (March 14th) in splendid condition. I left 14 colonies out-doors, of which I lost 4, the cause being as follows:

Last fall I had a sale, and sold quite a number of colonies. Some parties failed to come after them, and those did not get any protection; but the 10 colonies that have wintered out-doors are in fair condition. But I shall try a larger per cent. of my bees in the cellar hereafter.

If those who keep bees, if but a few colonies, would get some good bee-paper, such as the AMERICAN BEE JOURNAL or *Gleanings in Bee-Culture*, it would be a great help to them. As for me, I would not think of doing without a good bee-paper to read, as long as I keep bees.

Pioneer, Ohio. CHARLES E. FALKNER.

Bees Frozen in Tennessee.

The winter has been extremely bad here in the South, freezing a large number of bees to death in each colony. I did not lose a colony, but a good many were queenless this spring. The queens lost were all blacks and hybrids, of which I had about half. The Italians came through without the loss of a single queen, the blacks being in the best condition in the fall, so I am inclined to think the Italians will winter the best here. The spring has been more favorable, and bees are breeding up faster than last spring. We had a frost here on April 24th; the timber being green, the tenderest vegetation was injured slightly.

R. A. SHULTZ.

Cosby, Tenn., April 26, 1893.

Bee-Diarrhea—Hardy Bees.

On page 531, Dr. Miller does not agree with me about bee-diarrhea, and when he disagrees with a person he does it in such a pleasant way that it makes one love him better. He says if the bees of which I spoke could have had a flight in time, they might have been saved. Now, all of those bees were on the summer stands, and had been all winter, and were transferred about $1\frac{1}{2}$ weeks before. They had a flight for nearly every day for two or three weeks before they died, it being very warm about that time. They might have died of something else. They had honey when I transferred them, but they certainly had a terrible case of the diarrhea, while all other colonies were all right—all transferred about the same time.

The most of my bees are in Illinois, 60 miles from here, yet I have two colonies here in box-hives that I got in March; one has a half-inch crevice in the top, front, and two sides, and the other has a hole rotted out on top, 5 inches wide across the box, with nothing over it. It rained and snowed in on the combs and bees all winter, and sometimes the mercury was 12 degrees below zero. Now, May 1st, they are very strong colonies, and at work with a vim, with a few immature bees lying at the front of the hive for a month or more, which is a

true sign of a fertile queen. Now if bees can live in that way all winter, they need no chaff hives nor cellar.

The AMERICAN BEE JOURNAL is a welcome visitor at my home. R. H. HUMPHRIES.
Morganfield, Ky., May 1, 1893.

Snow and Rain—Wintered Well.

Bee-keeping has a dark side this spring. April came with a few nice days, and then it set in cold and windy. No pollen has been gathered so far this spring, but the first week in April I put out rye and wheat flour. The first day my bees carried in about 11 pounds of it, and in two days they carried in about 25 pounds. I had 66 colonies then. I struck the nail on the head when I fed the flour. The sun has shone only part of two days in the 14 days of the last two weeks.

On April 18th it rained heavy for 24 hours, and then it snowed for 40 hours—the snow fell 18 inches deep on the level. The coldest was 4 degrees below freezing. My bee-yard was a hard looking sight. A heavy wind set in, and it drifted the snow badly, the drifts being 4 to 6 feet deep. It rains every day—it is raining hard while I write now.

I put 68 colonies into the cellar last fall; one died, and one was weak. My bees never came through in better condition, and I have kept bees for 12 years. The hives were chock-full of bees, when put out. If this rainy weather holds out much longer, it is going to be awfully hard on the bees. The fields and low lands are flooded. My bees were never in better condition for a crop of honey, but everything looks dark and gloomy now.

C. A. GOODELL.
Mankato, Minn., April 25, 1893.

Springing Bees—Stealing Eggs.

I cannot but observe the many testimonials in the BEE JOURNAL, giving their good luck in wintering bees; how nicely they came out on April 1st or 5th, with but little (if any) loss; and could they but tell to-day, I fear the tenor would be very much changed. For me, there is but very little trouble in wintering. I wintered my bees with scarcely 2 per cent. loss, but the "springing," if I may use the expression, is very much more severe for me, and I think I can safely say the same for others.

I placed in the cellar 110 colonies, apparently in good condition, with plenty of stores, and all, save two, came out with sufficient stores; but April has been a "stunner" for me. Good 10 per cent. will not excuse me at present, and I doubt not but there will be more to follow, should the present weather exist very much longer.

Now, I am led to believe that if nearly all who have given their early testimonies were privileged to give them to-day, their tone would be very different from the former. I claim we are not "out of the woods" yet, and will not be before May 10th, to say the least.

One thing more I wish to speak about: On page 535, Mr. Thos. Johnson, in the latter part of a paragraph, says: "I removed all queen-cells," etc. I can corroborate every word, for I had the same experience, and found queen-cells—started and larvae in them—that had neither eggs nor larvae in them at the time of placing fresh combs with both eggs and larvae there. Now I do not wish to interfere with any one's theory, not even with Mrs. Atchley's, but just you stick right to it, Mr. Johnson, and I will help hold you up with both hands and strong arms, for you are all right. Theory and practice are twin sisters, and go hand in hand, but practice pulls theory along, especially in this case. A. Y. BALDWIN.

DeKalb, Ills., April 28, 1893.

Lost No Bees—Good Report.

I wintered all my bees on the summer stands, no outside cases, single-walled dove-tailed hives, no packing, but two, which had on a super with some old carpet over the bees; the rest had sealed covers, with old carpet on top of the covers, protected by a board to keep dry. I had corn-stalks set along the row of hives for a wind-break. Although a very hard winter for this latitude (38 degrees), I did not lose any bees—all came out equally strong in the spring.

The first pollen was brought in on March 7th, from soft maple and elm. The first swarm issued on April 25th, also on April 29th. Bees did well on fruit-bloom at first for about three weeks, then a cold spell with two severe frosts cut off supplies for several days, from April 14th to about the 23rd.

I had only 8 colonies, spring count, and have moved my bees one mile out of town to a better location for pasture and protection. I shipped the most of my last year's honey to St. Louis, in one-pound sections, which sold for 16 cents per section, what I had sold at home for 12½ cents. The whole product from 7 colonies brought me, in cash, \$55—not so bad for a beginner, I think.

The future appears promising for a good crop this season, although it is, at this date, raining nearly all the time, but not cold as it was last spring at the same date.

D. A. CADWALLADER.
Prairie du Rocher, Ills., April 30, 1893.

"A Modern Bee-Farm and Its Economic Management," is the title of a splendid book on practical bee-culture, by Mr. S. Simmins, of England. It is 5½ x 8½ inches in size, and contains 270 pages, nicely illustrated, and bound in cloth. It shows "how bees may be cultivated as a means of livelihood; as a health-giving pursuit; and as a source of recreation to the busy man." It also illustrates how profits may be "made certain by growing crops yielding the most honey, having also other uses; and by judgment in breeding a good working strain of bees." Price, postpaid, from this office, \$1.00; or clubbed with the BEE JOURNAL for one year, for \$1.70.

Honey & Beeswax Market Quotations.

The following Quotations are for Saturday, May 20th, 1893:

CHICAGO, ILLS.—Honey is about cleaned up so far as fine comb is concerned. Quite a good deal of poor to fair is on sale, prices ranging from 13 to 15c. Fancy would bring 18c. Extracted, 6@8c. Beeswax, 25c.
R. A. B. & Co.

KANSAS CITY, Mo.—Receipts and stocks very light, demand good. We quote: No. 1 white 1-lbs, 16@17c.; No. 2, 14@15c.; No. 1 amber 1-lbs, 15c.; No. 2 amber, 10@12c. Extracted, white, 7@7½c.; amber, 5@6c.
Beeswax—20@23c.
C. M. C. C.

CINCINNATI, O.—A short supply of extracted honey is the cause of a slow demand. It forbids an effort on our part to sell. It brings 6@8c. There is no choice comb honey on our market, and prices are nominal at 12@16c., in a small way.

Beeswax—Demand good, at 22@25c for good to choice yellow. Supply good. C. F. M. & S.

NEW YORK, N. Y.—Comb honey is well cleaned up. Fancy white is selling at 14@15c. Off grades, 12@13c., and buckwheat, 9@10c. Extracted is dull, and the market well stocked with West India honey, which sells at from 68@75c per gallon. Beeswax, 26@28c.
H. B. & S.

SAN FRANCISCO, CALIF.—Choice extracted is scarce at 7@7½c., and demand heavier than supply. Choice comb is not scarce at 10@12c., according to quality, 1-lbs. Beeswax is neglected at 22@23c.
S. L. & S.

KANSAS CITY, Mo.—Demand good, supply very light. White 1-lbs, 16c. Extracted, 6@7c. No beeswax on the market. H. & B.

CHICAGO, ILL.—Fancy stock is very scarce, with plenty of inquiry, with good prices offered for same. It sells readily at 18c.; No. 1 comb, 16@17c. Dark sells slow. White extracted, fair supply, with good demand at 8½c.; dark, 6@7c. Beeswax—23@25c. J. A. L.

BOSTON, MASS.—Honey is selling slow and prices are lower. Best 1-lb. comb, 16@17c.—Extracted, 8@10c.

Beeswax—None on hand

B. & R.

MINNESOTA, MINN.—Honey is in good demand, especially for fancy white clover. There is considerable of the low grade on the market. Extracted is also improving in prices. Beeswax in light demand. Fancy white clover, in 1 lb. sections, 18c.; choice white clover, 16c.; golden-rod, 1 lb. sections, 13@14c.; dark, 12@13c. Extracted, 9@10c.
J. A. S. & Co.

ALBANY, N. Y.—Honey market is very quiet now, as between seasons. Beeswax—at 30@32c. for good color.
H. R. W.

Your Neighbor Bee-keeper
—have you asked him or her to subscribe for the BEE JOURNAL? Only \$1.00 will pay for it for a whole year. And, besides, you can have Newman's book on "Bees and Honey" as a premium, for sending us two new subscribers. Don't neglect your neighbor! See page 643.

List of Honey and Beeswax Dealers,

Most of whom Quote in this Journal.

Chicago, Ills.

R. A. BURNETT & Co., 161 South Water Street.

New York, N. Y.

F. I. SAGE & SON, 183 Reade Street.

HILDRETH BROS. & SEGELEN, 28 & 30 West Broadway.

San Francisco, Calif.

SCHACHT, LEMCKE & STEINER, 10 Drumm St.

Minneapolis, Minn.

J. A. SHEA & Co., 14 & 16 Hennepin Avenue.

Kansas City, Mo.

HAMBLIN & BEARSS, 514 Walnut Street.

CLEMOMS-MASON CO., 521 Walnut St.

Albany, N. Y.

H. R. WRIGHT, 326 & 328 Broadway

Hamilton, Ills.

CHAS. DADANT & SON.

Cincinnati, Ohio.

C. F. MUTH & SON, cor. Freeman & Central avs.

Bee-Keeping for Profit.

We have just issued a revised and enlarged edition of Dr. Tinker's book, called "Bee-Keeping for Profit." It details his most excellent "new system, or how to get the largest yields of comb and extracted honey." The book contains 80 pages in all, and is illustrated. Price, postpaid, 25 cents, or clubbed with the BEE JOURNAL for one year, for \$1.15.

Wants or Exchanges.

Under this heading, Notices of 5 lines, or less, will be inserted at 10 cents per line, for each insertion, when specially ordered into this Department. If over 5 lines, the additional lines will cost 20 cents each.

TO EXCHANGE—High Grade Safety Bicyc., for Honey or Wax.
17Atf J. A. GREEN, Ottawa, Ill.

TO EXCHANGE—Good 6-inch Vandervort Fdn. Mill, for wax, honey, or offers.
18A4t J. H. & A. L. BOYDEN,
Saline, Mich.

BEE-KEEPERS, EXCHANGE PICTURES.—Send \$1.00 with Cabinet Photograph, to R. E. Pittman, Griften, N. C., and get one dozen card size photo's; ½ doz. for 75 cents.

WANTED—40 Colonies of Italian or hybrid Bees on L. frames, combs wired and free from disease. Write me your price, condition of Bees, etc., at once.

WARD LAMKIN, Goodyears, Cayuga Co., N. Y.